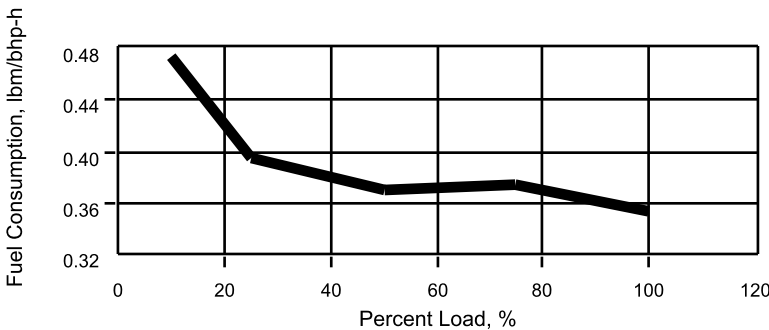
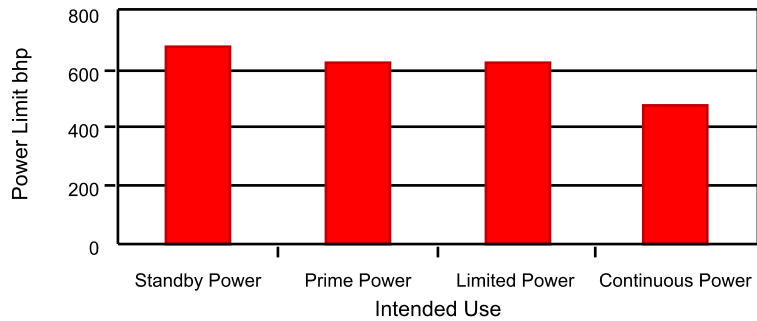
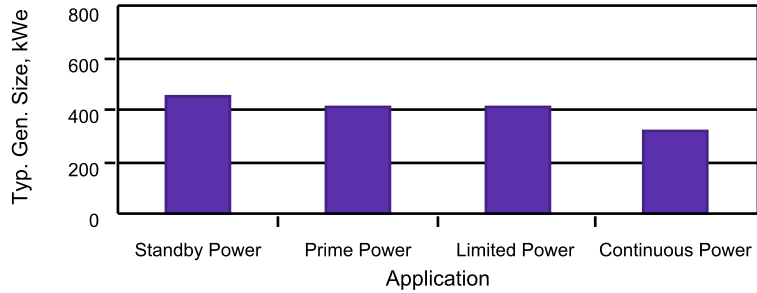




Gen Set Series 60 (14.0 L) - 6063HV35 685 bhp @ 1800 r/min

Performance Data
06N04M8147



Available power is shown. Data does not include parasitic losses from fans, accessories, etc. Parasitic losses will vary depending on the final product configuration and reduce the available power accordingly.

Standby Power 60 Hz - 460 kW _e		
Percent Load, %	Power, bhp	Fuel Consumption, lb _m /bhp-h
10	69	0.473
25	171	0.394
50	343	0.370
75	494	0.374
100	685	0.353

Prime Power 60 Hz - 420 kW _e		
Percent Load, %	Power, bhp	Fuel Consumption, lb _m /bhp-h
10	62	-
25	156	0.395
50	312	0.367
75	467	0.364
100	623	0.363
110	685	0.353

Limited Power 60 Hz - 420 kW _e		
Percent Load, %	Power, bhp	Fuel Consumption, lb _m /bhp-h
10	62	-
25	156	0.395
50	312	0.367
75	467	0.364
100	623	0.363
110	685	0.353

Continuous Power 60 Hz - 320 kW _e		
Percent Load, %	Power, bhp	Fuel Consumption, lb _m /bhp-h
10	48	0.554
25	119	0.416
50	238	0.377
75	356	0.369
100	475	0.364

Tolerance for power values shown is +2/-0% at the conditions listed.
Tolerance for fuel values shown has not been specified.

Condition	SAE J1995
Air Inlet Temp.	77 °F
Total Baro. Pressure	30 in. Hg
Dry Baro. Pressure	29 in. Hg
Fuel Inlet Temp.	100 °F
Spec. Fuel Gravity [ref. temp.]	0.8376 100 °F
Air Inlet Restriction	10 in. H ₂ O
Exhaust Back Pressure	15 in. H ₂ O
Min. Fuel Heat Content [ref. test spec]	20,500 Btu/lb _m -
Air Density	0.1 lb/ft ³
Fuel Density	6.99 lb/gal (US)
Oil Density	7.50 lb/gal (US)



Gen Set
Series 60 (14.0 L) - 6063HV35
685 bhp @ 1800 r/min

Technical Data
06N04M8147

	Standby Power 60 Hz - 460 kW _e	Prime Power 60 Hz - 420 kW _e	Limited Power 60 Hz - 420 kW _e	Continuous Power 60 Hz - 320 kW _e	
Calibration Details					
Control System	DDEC V Electronics	DDEC V Electronics	DDEC V Electronics	DDEC V Electronics	-
Maximum Power	685	685	685	685	bhp
Maximum Power Speed	1800	1800	1800	1800	r/min
Rated Power Limit	685	623	623	475	bhp
Rated Power Limit Speed	1800	1800	1800	1800	r/min
Typical Low Idle Speed	-	-	-	-	r/min
Typical High Idle Speed	2180	2180	2180	2180	r/min
Intended Use	Standby Power applications	Prime Power applications	Limited Run Time Power applications	Continuous Power applications	-
Cooling System					
Coolant Capacity in Engine Circuit	24	24	24	24	qt (US)
Coolant Flow Rate in Engine Circuit	96	96	96	96	gal/min (US)
Heat Rejection to Engine Coolant Circuit	9400	9300	9300	7550	Btu/min
Heat Rejection to Air in Charge Air Circuit	7250	5950	5950	4250	Btu/min
Radiated Heat Rejection	4250	4250	4250	3950	Btu/min
Exhaust System					
Exhaust Flow Rate (volumetric)	3973	3630	3630	2975	ft ³ /min
Exhaust Temperature	1058	980	980	903	°F
Fuel System					
Injector Device	EUI N3	EUI N3	EUI N3	EUI N3	-
Injection System	EUI	EUI	EUI	EUI	-
Injector Timing Height	-	-	-	-	mm
Fuel Flow Rate (mass)	-	-	-	-	lb _m /h
Fuel Flow Rate (volumetric)	-	-	-	-	gal/h (US)
Fuel Spill Rate (mass)	-	-	-	-	lb _m /h
Fuel Spill Rate (volumetric)	-	-	-	-	gal/h (US)
Fuel Consumption (mass)	241.9	226.2	226.2	172.9	lb _m /h
Fuel Consumption (volumetric)	34.6	32.4	32.4	24.7	gal/h (US)
Heat Rejection to Fuel	150	-	-	-	Btu/min
Intake System					
Engine Air Flow Rate (volumetric)	1395	1345	1345	1170	ft ³ /min
Intake Manifold Pressure	78	72	72	55	in. Hg
Turbocharger Compressor Outlet Temp.	414	398	398	349	°F

Available power is shown. Data does not include parasitic losses from fans, accessories, etc. Parasitic losses will vary depending on the final product configuration and reduce the available power accordingly.



Gen Set
Series 60 (14.0 L) - 6063HV35
685 bhp @ 1800 r/min

Technical Data
06N04M8147

	Standby Power 60 Hz - 460 kW _e	Prime Power 60 Hz - 420 kW _e	Limited Power 60 Hz - 420 kW _e	Continuous Power 60 Hz - 320 kW _e	
Lubrication System					
Oil Flow Rate	-	-	-	-	gal/min (US)
Oil Pressure	-	-	-	-	lbf/in. ²
Oil Consumption (mass)	0.24	0.23	0.23	0.17	lb _m /h
Oil Consumption (volumetric)	0.13	0.12	0.12	0.09	qt/h (US)
Additional Information					
Altitude Capability	-	-	-	-	ft
Brake Mean Effective Pressure (BMEP)	353	321	321	245	lbf/in. ²
Compression Ratio	16.0	16.0	16.0	16.0	: 1
Friction Horsepower	-	-	-	-	fhp
Mean Piston Speed	1984	1984	1984	1984	ft/min
Turbocharger	GT55, Wastegated	GT55, Wastegated	GT55, Wastegated	GT55, Wastegated	-

Available power is shown. Data does not include parasitic losses from fans, accessories, etc. Parasitic losses will vary depending on the final product configuration and reduce the available power accordingly.



Gen Set Series 60 (14.0 L)

Installation Data 6063HV35

685 bhp @ 1800 r/min

Cooling System

Min. Coolant Flow Rate in Engine Circuit	86.4 gal/min (US)
Max. Coolant Out Temp. in Engine Circuit	210 °F
Max. Engine Water Pump Discharge Pressure (Exclusive of Pressure Cap)	- lbf/in. ²
Min. Water Pump Inlet Pressure (Rapid Warm-up Rad.)	0.0 lbf/in. ²
Min. Water Pump Inlet Pressure (Conventional Rad.)	0.0 lbf/in. ²
Max. Water Pump Static Pressure Head	21.7 lbf/in. ²
Max. External Restriction in Engine Circuit	5.3 lbf/in. ²
Min. Engine Coolant Fill Rate	3.0 gal/min (US)
Min. Drawdown	10 %
Max. Dearation Time	30 min
Min. Pressure Cap	9.0 lbf/in. ²
Max. System Pressure (Exclusive of Pressure Cap)	7.8 lbf/in. ²
Min. Top Tank Coolant Temp.	160 °F

Crankshaft System

Max. Radial Load- Crankshaft	- lbf
Max. Continuous Load- Thrust Bearing	900 lbf
Max. Intermittent Load- Thrust Bearing	1800 lbf
Max. Shock Load- Thrust Bearing	- lbf
Max. Vertical Load at Rear Face of Flywheel (+)	2001 lbf
Max. Static Bending Moment at Rear Face of Block	1000 ft-lbf

(+) The weight of the flywheel must be included with the OEM components.

Electrical System

Max. Resistance of Starting Circuit - 12 V System	0.0012 Ω
Max. Resistance of Starting Circuit - 24 V System	0.002 Ω
Rec. Battery Capacity - 12 V System	1875 CCA
Rec. Battery Capacity - 24 V System	950 CCA

Exhaust System

Max. Exhaust System Back Pressure	3.0 in. Hg
Rec. Dry Exhaust Pipe Dia. - Single	5.0 in.
Rec. Dry Exhaust Pipe Dia. - Dual	4.0 in.

Fuel System

Max. Fuel Inlet Temp.	140 °F
Max. Fuel Pump Suction for Clean System	6.0 in. Hg
Max. Fuel Pump Suction for Dirty System	12.2 in. Hg
Rec. Primary Fuel Filter Size	25 micron
Max. Secondary Fuel Filter Size	5 micron

Intake System

Max. Ambient to Intake Manifold Temp. Differential	45 °F
Max. Ambient to Turbo Compressor Inlet Temp. Rise	30 °F
Max. CAC System Total Pressure Drop	4 in. Hg
Max. Crankcase Pressure	3 in. H ₂ O
Max. Intake Manifold Pressure	- in. Hg
Max. Intake Manifold Temp.	151 °F
Max. Intake Restriction for a Clean Air Cleaner	12 in. H ₂ O
Max. Intake Restriction for a Dirty Air Cleaner	20 in. H ₂ O
Rec. Intake Pipe Dia. - Single	6.0 in.
Rec. Intake Pipe Dia. - Dual	- in.

Lubrication System

Max. Change in Oil Pressure from Engine Out to Oil Cooler Inlet for Remote-mounted Filters	- in. H ₂ O
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Gen Set
Series 60 (14.0 L) - 6063HV35
685 bhp @ 1800 r/min

Emission Data
06N04M8147

Certification Summary

Certification Code (CWC)	5536
US Nonroad (Tier 1)	Not certified.
US Nonroad (Tier 2)	Not certified.
US Nonroad (Tier 3)	Certified.
US Nonroad (Tier 4)	Not certified.
EURO Nonroad (Stage I)	Not certified.
EURO Nonroad (Stage II)	Not certified.
EURO Nonroad (Stage III)	Not certified.
EURO Nonroad (Stage IV)	Not certified.
South Coast Air Quality Management District (SCAQMD)	Certified.

Compliance Summary

Japanese Nonroad	No.
TA-Luft Power Plant	No.
SCAQMD Permit Information	
- Application Number	439140
- Status	Certified.
- Issue Date	01 APR 2005
- Expiration Date	01 APR 2006

Available power is shown. Data does not include parasitic losses from fans, accessories, etc. Parasitic losses will vary depending on the final product configuration and reduce the available power accordingly.

Emission Data

Steady-state Emission Summary						
NO _x						- g/h
CO						- g/h
HC						- g/h
SO ₂ - with .5% sulfur content fuel						549 g/h
SO ₂ - with .05% sulfur content fuel						54.9 g/h
Particulates						- g/h
C1 Cycle Emission Summary						
NO _x						- g/bhp·h
CO						- g/bhp·h
HC						- g/bhp·h
Particulates						- g/bhp·h
D2 - Cycle Emissions						
Engine Load	10%	25%	50%	75%	100%	Cycle Value g/bhp·h
						g/h
CO	245	293	125	362	341	0.80
HC	53.6	26.0	24.6	21.0	16.8	0.08
SO ₂ - with 0.5% sulfur content fuel	74.1	153	288	419	549	-
SO ₂ - with 0.05% sulfur content fuel	7.4	15.3	28.8	41.9	54.9	-
Particulates	12.6	69.5	26.3	44.2	45.5	0.13
NO _x	251	366	839	1480	2390	2.72
Opacity Mode						
Acceleration						- %
Lug						- %
Peak						- %
Smoke						
Bosch No.						0.7
@ Peak Torque Speed (- -)						-

Emission levels of the engine may vary as a function of ambient temperature, barometric pressure, humidity, fuel type and quality, installation parameters, measuring instrumentation, etc. The data provided are laboratory results from one engine representing this rating. The data was obtained under controlled environmental conditions with calibrated instrumentation traceable to the United States National Bureau of Standards and in compliance with US EPA regulations found at 40 CFR Part 89 (Control of Emissions From New and In-Use Nonroad Compression-Ignition Engines). The weighted cycle value from each engine is guaranteed to be below the US EPA Standards at the US EPA defined conditions.



Gen Set
 Series 60 (14.0 L) - 6063HV35
 685 bhp @ 1800 r/min

Noise Summary
 06N04M8147

Frequency, Hz	Surface, dB(A)	Exhaust, dB(A)	Structureborne Longitudinal, dB(A)	Structureborne Transverse, dB(A)	Structureborne Vertical, dB(A)
40	-	-	-	-	-
80	63.0	-	-	-	-
100	72.0	-	-	-	-
125	76.0	-	-	-	-
160	84.0	-	-	-	-
200	79.0	-	-	-	-
250	81.0	-	-	-	-
315	86.0	-	-	-	-
400	86.0	-	-	-	-
500	86.0	-	-	-	-
630	90.0	-	-	-	-
800	94.0	-	-	-	-
1000	96.0	-	-	-	-
1250	95.0	-	-	-	-
1600	96.0	-	-	-	-
2000	96.0	-	-	-	-
2500	95.0	-	-	-	-
3150	94.0	-	-	-	-
4000	89.0	-	-	-	-
5000	88.0	-	-	-	-
6300	85.0	-	-	-	-
8000	89.0	-	-	-	-
10,000	87.0	-	-	-	-
12,500	76.0	-	-	-	-
16,000	75.0	-	-	-	-
20,000	-	-	-	-	-
Total	104.3	-	-	-	-

Conditions and Tolerances

	Tolerance for values shown has	Tolerance for values shown has	Tolerance for values shown has	Tolerance for values shown has	Tolerance for values shown has
Data Tolerance	not been specified.	not been specified.	not been specified.	not been specified.	not been specified.
Test Standard	not specified	not specified	not specified	not specified	not specified
Comments	not specified	not specified	not specified	not specified	not specified



Gen Set Series 60 (14.0 L)

Mechanical Data 6063HV35

Camshaft	
UPC Group Number	06X01B6099
Type	Gear-driven
Location	In the cylinder head
Material	Bar stock (SAE 1513)
Surface Finish - Journal	Ground finish
Surface Finish - Lobe	Injector & Exhaust: Thielenhaus honed, Intake: Ground finish

Camshaft Bearing	
Type	Two-piece design
Material	Trimetal (Steel backed bronze with lead overlay)
Mean Effective Length [MEL]	1.486 in.
Mean Journal Diameter [MJD]	2.559 in.
Projected Area [per bearing]	3.80 in. ²

Connecting Rod	
Type	"I"-section
Material	Forged, steel alloy - SAE 4140

Connecting Rod Cap	
Type	-
Material	-

Connecting Rod Crank Pin Bearing	
Type	Precision, half-shell design
Quantity [per journal]	2
Material - Lower Bearing	Trimetal (steel-backed, bronze, and lead overlay)
Material - Upper Bearing	Trimetal (steel-backed, bronze, and lead overlay)
Mean Effective Length [MEL]	1.705 in.
Mean Journal Diameter [MJD]	3.346 in.
Projected Area [per bearing]	5.70 in. ²

Crankshaft	
Type	One-piece
Material	Forged, steel alloy - SAE 1548
Surface Finish - Journal	Induction hardened
Type of Balance	Dynamic

Crankshaft Main Bearing	
Type	Precision, half-shell design
Quantity [per journal]	2
Material - Lower Bearing	Trimetal (steel-backed, bronze, and lead overlay)
Material - Upper Bearing	Trimetal (steel-backed, bronze, and lead overlay)
Mean Effective Length [MEL]	1.547 in.
Mean Journal Diameter [MJD]	4.921 in.
Projected Area [per bearing]	7.61 in. ²

Crankshaft Thrust Bearing	
Type	-
Quantity	-
Mean Effective Length [MEL]	- in.
Mean Journal Diameter [MJD]	- in.
Projected Area [per bearing]	- in. ²

Cylinder Block	
UPC Group Number	06A01 6043
Type	Inline cylinder block
Material	Cast iron

Cylinder Head	
UPC Group Number	06A02 6034
Type	One-piece slab, 4 valves per cylinder
Material	Cast iron
Air Management	Cross-flow

Cylinder Liner	
UPC Group Number	06A01 6043
Type	Wet, replaceable liner
Material	Cast iron



Gen Set Series 60 (14.0 L)

Mechanical Data 6063HV35

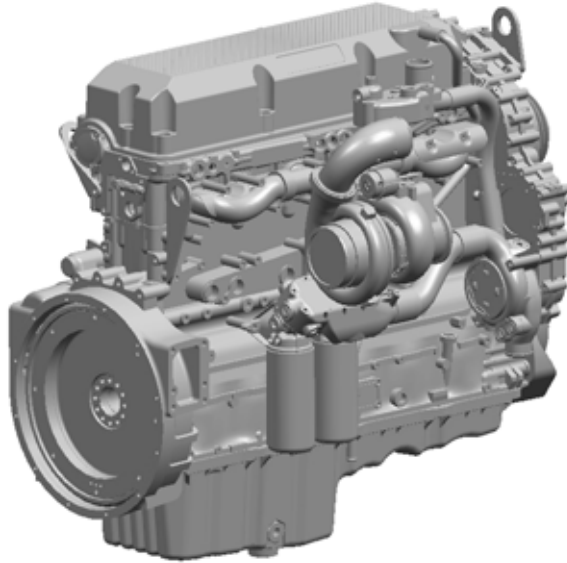
Exhaust Valve	
Type	Poppet valve with rotator
Material - Head	Nickel-based
Material - Stem	Chrome-plated
Operating Mechanism	Overhead camshaft with rocker arm
Type of Lifter	Roller follower
Quantity [valves per cylinder]	2
Quantity [springs per valve]	1
Exhaust Valve Insert	
Type	Replaceable design
Material	Nickel-based - GM3550
Intake Valve	
Type	Poppet valve with rotator
Material - Head	Iron-based
Material - Stem	Chrome-plated
Operating Mechanism	Overhead camshaft with rocker arm
Type of Lifter	Roller follower
Quantity [valves per cylinder]	2
Quantity [springs per valve]	1
Intake Valve Insert	
Type	Replaceable design
Material	Iron-based - GM76135

Piston	
Type	Cross-head design
Material - Crown	Steel
Material - Skirt	Aluminum
Cooling	Oil- cocktail shaker
Piston Pin	
Type	Polished and hardened
Material	-
Wrist Pin Keepers	-
Piston Pin Bearing	
Type	One-piece bushing
Material	Bronze - solid
Piston Ring, Compression	
Top Ring	Keystone - chrome, barrel face design
Second Ring	Keystone - chrome, barrel-tapered face design
Quantity [per piston]	-
Piston Ring, Oil	
Type	Double rail with expander, conformable
Quantity [per piston]	1
Location	Bottom of piston dome



Gen Set Series 60 (14.0 L) - 6063HV35

Engine Configuration Data Summary



Description	
Model Number	6063HV35
Number of Cylinders	6
Bore	5.24 in.
Stroke	6.61 in.
Displacement - per cylinder	142 in. ³
Displacement - total	855 in. ³
Aftertreatment	No Aftertreatment Device
Aspiration	Turbocharged
Combustion System	Direct Injection
Charge Air Cooling System	Air-to-Air Charge Cooling
Electronic System	DDEC V Electronics
Engine Type	Inline Engine
Ventilation	Open Engine Crankcase
Status	Available
Availability Date	01 JAN 2005
Discontinued Date	-

This model is approved for commercial gen set applications that can be operated at either 50 or 60 Hz.

Size	
Overall Length	57.20 in.
Overall Width	39.63 in.
Overall Height	50.07 in.

Weight	
Approximate Dry Weight	2551 lb _m
Approximate Wet Weight	2679 lb _m

Center of Gravity for a Dry Engine	
Distance from Rear Face of Block: x-axis	22.30 in.
Distance above Crankshaft: y-axis	7.52 in.
Distance to the Right of the Crankshaft: z-axis	1.32 in.